The expert user club Newsletter

EXPERTISE

Welcome to issue 4 and 5 our first double issue of EXPERTISE - I hope you had a merry christmas and a good time trying out some of the cheats in last months issue.

As I sit here surrounded by that horrible white stuff that falls from the heavens at this time of year pondering the meaning of life, whether Freeze Frame mk 3B can really do WAR, and whether Mak 72 of Ringwood, Hants will send the 'boys' round after I told him to go buy a Spectrum last month, (it was done 'tongue in cheek' - honest), I am reminded, rudely, that if I don't get on with this issue, I will have my ESM permanently disconnected. So, with a brief glance in the direction of a large pile of pokes sent in by yourselves and gratefully received I might add, on with the show.

In this issue, we will be going into the latest version of the operating system V2.9 which was released on 5th January and mentioned last month. There will be the uusual, aforementioned collection of cheats, and the start of the 'Machine-code for Idiots' series. Plus some more queries answered and hints for doing some recently released games.
There is also details of an Expert operating system available only to EUC members - this can be used instead of the new V2.9.
Plus news of a NEW Trilogic product for disk drive owners.

MEMBERSHIP_DETAILS_AND_BACK_ISSUES

Membership costs 3.75 for 6 months (overseaas incl Europe add 2.00 to cover airmail postage).
Expertise is sent monthly or bimonthly for double issues, but please note, it may arrive at any time within the month - we have so many members and are not as well organised as a professional publishing house because we rely upon the help of UNPAID enthusiastic amateurs. Please be patient if we are two or three weaks behind schedule - the EUC is growing steadily so there is no need to worry.

BACK ISSUES

These are available for 65p each. The first issue was OCTOBER '86.

NEWS

ZZAP 64 - RUN BY PLONKERS ?... OR IS THE EXPERT TOO HOT TO HANDLE ?

In the continuing saga of the Expert column in ZZap, the news is all bad I'm sorry to say. Zzap are still declining to run the column and what is worse, have decided to ban all adverts relating to tape to disk back-up cartridges. What has caused this 'holier than thou' attitude is open to speculation - perhaps it was the booze at christmas, a bit of bribery and corruption, or even blackmail. I suspect a combination of all three - I wonder if some ZZap staff members have recently acquired Amigas ?....or whether the boring, spitaful old f***ts at USleas GOLD have put on more pressure. If this is the case, then I can't see how they dare sell a game which has obviously been compacted using the Expert and which still has Trilogic's copyright message embedded in the code. (America's Cup Challenge)

It is obvious that banning the column and these adverts is not going to make the Expert go away; whoever decided upon the change in policy must belong to a new species of Ostrich. Anyway, all we can do about it is to voice our protests to the publishers of ZZap at the address given below - so getting writing please, now.

Send your protests to:-
Roger Kean,
Newsfield Publications,
Ludlow,
Shropshire.

THE EXPERT DECOMPACTOR

Last month I mentioned that US Gold had used the Expert decompacting routine in America's Cup Challenge - well now, a Konami Game is using it too. This time, however, the producers of the game have had the decency to ask Trilogic's permission and have agreed to mention that the Expert has been used for 'data compression' in the literature enclosed with the game.

Another software house has just purchased some more Expert cartridges for their programmers - confirming what we all know - the Expert is brilliant for programming too.

DOLPHIN_DOS_-_DON'T_BUY_IT_.....WHY_?

If your thinking of buying Dolphin Dos - don't because Trilogic are about to announce the release of a BETTER, CHEAPER, ALL BRITISH product. I can't give you many details at the moment, but suffice it to say that it converts the 1541 disk drive from serial to parallel operation giving a 25 FOLD SPEED IMPROVEMENT. Plus, a free utility disk is included which will copy any disk - even non-Commodore disks.
Watch this space for more details.

SPECIAL_OFFER_TO_MEMBERS. - BUY THIS NEW OPERATING SYSTEM FOR ONLY £2.50

EUC members can have a copy of a new operating system by N Wheatley, of Bromley, Kent for only £2.50 including disk & postage. (overseas members please add £1.00 extra for Airmail.)
Called UC2.9A, it is based on the current V2.9, but has commands more in keeping with normal Commodore monitor syntax. Below, is a list of the commands and their function.
One of the most useful improvements is the change to the I command so that you now get 32 bytes shown per line in screen Ascii - not hex - this is great for finding text in memory.

Monitor Commands

£ converts decimal to hex
$ converts hex to decimal
. toggles ram/rom and now also shows which bank is in. (= X command in V2.9)
+ adds specified value to memory (also called increment)
- subtracts specified value from memory (decrement)
/ sets registers
@ disk command - now MUST preced most disk commands
A assemble
B list Basic
C compare memory
D disassemble memory
E exclusive or memory
F fill memory
G go to address (JMP)
H hunt through memory
I interpet memory and display Ascii value. Unprintable ones have $40 added.
J jump (JSR)
K search
L load from disk (device 8)and display start and end addresses.
M monitor/modify memory
N new memory - NB you must type NN (return) as a precaution against accidental newing of memory
P special new for protected programs - random bytes added.
Q sets/shows Q value. Q value found automatically on pressing Restore.
R restart program
S Save to device 8
T transfer - will transfer overlapping blocks.
U sets user screen/border/text colours
V verify
X exits to Basic
Z compact and save
- display register block

The decompactor has also been changed so that the screen is now blanked and the border flashes while decompacting. Please note: you do not get the news instruction book with this version so please read the notes on V2.9 in this issue.

YOUR QUERIES ANSWERED

MULTI-PART PROGRAMS

Some of you seem to be having difficulty transferring the multi-part programs that can be done. At present these are programs using the Novaload tape loader such as Summer & Winter Games etc. Kennedy Approach can't be done although it uses Novaload. With Racing Destruction Set, make sure you have plenty of disk space - use two disks or notch and turn over a disk.

The procedure is to use V2.7M, load the game and then stop it on the option screen - NOT forgetting to stop the tape as well.

Now, set the Q value (see 'tips' below) and then save it using the Z command. When it is saved, press N return and load "MULTI FILES" from the EXPERT Master disk. Type RUN when loaded (you don't need the Expert for this stage) and follow the On-screen instructions for transferring the subsequent files.

TIPS

1) To find the Q value the easy way, first use V2.9, load the game, stop it on the option screen and note the Q value found by V2.9. Now reprogram with V2.7M and enter the Q value just found when you've stopped the game.

2) If a game does not continue after you have selected an option, try pressing play on tape - don't forget, the program does not know it has been loaded from disk so it is expecting to load the subsequent files from tape even though they will be loaded from disK.

PROBLEMS WITH SOUND ON SOME GAME

David Perry, of Carlisle says he is having trouble with Loco's sound (Fistful of Fun, Alligata).

Well, all sound problems stem from the fact that most of the sound chip registers are write only. This means that once a value is written into the register there is no way it can be read out again. In fact, the Expert operating systems have to guess the correct values and this accounts for some audible differences in the sound when you run Experted games. In about 95% of cases, the guess is near enough.

The only way to ensure perfect sound is to find the Restart address of the game - the one that starts the game at the very beginning as though it had just finished loading from tape. This works because the registers are set by the game to the correct, appropriate values. I will be explaining ways to find Restart addresses next time.

Terry Gowshall of 4 Elm Court, Kelmscott 6111, Perth, W. Australia says that if you have problems with programs using speech or digitised sound, then press Restore and save them before any sound is heard. Two games he's had to do this with are: ACE and Jonah Barrington's Squash.

EXPERT OPERATING SYSTEMS

Ben Dearnley, 3/26 Mount Street, Coogee, N.S.W. Australia asks if he can have the earlier operating systems. There is not really much point in having them now since V2.9 supercedes all the others except V2.7M. If anyone would like to send Ben a copy of them, I'm sure he'd be greatful.

BALLBLAZER

The Restart address and Q value for this has been sent in by Derek Whayman of Harlow, Essex; they are /0D00 Q D0

GREEN BERET

We still receive letters asking how to do this. It is simple enough with V2.9. Just load the game and stop it and then save it. When reloading remember to switch off the disk drive whilst it is decompacting or it'll hang up. This is inevitable if you've a 128D since you can't turn off the drive - there is no way round it so far as we know.

THE_NEW_OPERATING_SYSTEM_-_VERSION_2.9 by John Twiddy.

     The main features of the new operating system V2.9 are the automatic Q
command, and the register display which is shown on entering the monitor.
     The V2.9 disk has the following programs on it:
V2.9   seems to work with almost all programs.
V2.7M for doing some multi-part games
BOOT   for menu generation and fast reloading - must be the first file on your
       back-up disk
NO BLOCKS BOOT - as above but can be put on back-up disks at any time.
DISK/TAPE V2.4 for transferring Experted programs from disk to tape.
MULTI-FILES for transferring subsequent files of multi-part programs.

     When you program the Expert, you'll only have V2.9 or V2.7M to choose
from. When you've selected V2.9, switched to on and pressed Reset, a once
only start-up screen will show the commands available. Pressing any key will
then call up the monitor so that the screen will now look like this:-   (Blue
background and border.)

05
     PC SR AC XR YR L1 QA NV BDIZC
 / 0000 00 00 00 00 37 05
 .

The status of the flags is indicated by an underline if the flag is set.

The number in the left hand corner is the Q value found by the system when
you pressed RESTORE. The number is preceded by a minus sign if part of the
screen memory has had to be allocated to the Q factor.

     Many new commands have been added and some of the existing ones improved.

NEW_COMMANDS

B   Lists any Basic program present in memory; bypassing all anti-listing
    techniques. Some programs start by doing an SYS. You can find it with
    this command.
C   Compares memory
E   Exclusively ORs memory.
H   Hunts for either a) the specified bytes or sequence of bytes,
                  or   b) Ascii text strings.
                  or   c) the screen Ascii value of text strings
I   Increments memory (adds the specified value to the value in each location)
J   JSR followed by RTS after the sub routine
K   Searches for any Reference to an address, including listing branches to it
    This command will also search and change any references to point to
    another area.
O   Redisplays the registers
P   special NEW command to defeat protected programs - do not use it unless
    N won't work - ie a program will not load in and run after resetting with
    the N command.
T   Transfers memory - will transfer overlapping blocks.
U   Converts a number from hex to decimal
?   Converts a number form decimal to hex.
+   sets screen colours, in order border, background, text. (0 to F for each)

   UPGRADES

     In January the next upgrade will be released called V1.9/2.9. Price is
the usual £3.50 including disk or £2.00 exchange.
     It will have a brand new machine-code monitor/operating system on it
with - wait for it - AN AUTOMATIC Q VALUE FINDER, PLUS lots more monitor
commands for you to corrupt your favourite games with. Further details are
given later in this newsletter.

MACHINE-CODE_-_FOR_IDIOTS Part 1.

There are many books on machine-code for beginners which cover the
basic stuff such as "what is a microprocessor, counting in binary, etc" but
I believe that the best way to learn is to experiment, and then try to
understand why what happened did happen.

INTRODUCTION

But first, I must explain that machine-code is nothing more than a
collection of binary numbers. All computers understand only binary because
each binary digit (now you know how 'bit' is derived) represents one of only
TWO possible states - a logic one or zero. As the bit is either on or off
these two states can be determined by a simple switch since this can also be
in only one of two states - on or off. Hence, the computer, which is simply
a very large collection of switches can only 'understand' binary.

Home computers use what is known as 8 bit architecture - which means
that in simple terms, the microprocessor uses 8 bits. Now the largest number
which can be represented by 8 bits is 255 (2 to the power 8) but a computer
with only 255 bytes of ram would be pretty useless. To get round this, the
address bus which originates from the microprocessor chip is 16 bit, so that
65,353 (2 to the power 16) locations can be addressed. Now you know why the
C64 has 64K since 65353 is called 64K. (1k is 1024 bytes to be precise = 2
to the power 10).

As we've just mentioned, the microprocessor can only handle 8 bit
numbers and so to enable it to control 16 address lines, it requires two 8
bit bytes to be supplied by the program. The first byte to be read is the
low byte, followed by the high byte - this order is opposite to how we write
and think of addresses so it is important to remember the difference.
Thus address D020 would be read as 20 followed by D0 - so the first or 'low'
8 address lines show 20 and the 'high' 8 would show D0. Each location can
of course only hold an 8 bit number - from 0 to 255 or 00 to FF in hex.

ASSEMBLERS_AND_MONITORS

You don't have to be very clever to realise that writing a program in
binary is not at all pleasant so to make life a lot easier, monitors and
assemblers were devised. Assemblers enable us to write machine code in
assembly language, using mnemonics and labels and they then interpret what
you have written and convert it into hex and finally store it in memory as
binary. Monitors allow us to inspect and alter the contents of the machine's
memory by displaying it in hex (with the M command) or producing a
disassembly (with the D command).

With an assembler, instead of using hex, you use an abreviation for the
actual instruction as it is described in plain English eg LDA = Load the
Accumulator, INX = INcrement the X register etc. Only numerical data such as
addresses need be entered in hex. Next a word about the syntax used.

An assembler or monitor can interpret a number as either an absolute
value or as an address. To distinguish these, an absolute value is preceded
by a hash followed by a dollar sign eg £$30 means the number 30 in hex (= 48
in decimal), whereas, $30 means memory location 30 (48 decimal - only hex
numbering will be used from now on, so try not to think in decimal). So LDA
£$30 would tell the assembler to load the accumulator with 30, whereas LDA
$30 means load it with the value found in memory location 30.

Finally, the instruction, when converted into hex by the
assembler/monitor is known as the OP CODE, and the address or data which
follows it is known as the OPERAND. Some instructions are not followed by
OPERANDS eg RTS. More powerful assemblers can use LABELS - these are
symbolic Operands and speed up programming. Eg JSR LOOP, JSR is the
instruction to Jump to a SubRoutine and LOOP is the label which is used
instead of an actual address eg $1000.

IN_AT_THE_DEEP_END
     Try this short m/c program:-

Tap Restore to enter the monitor and then type:-

A 1000 LDA £#00 (return) the screen will then look like this:-

.A 1000 A9 00   LDA £#00
.A 1002 _

Now type from the cursor position:- STA #D020 (return) - now it will look
like this:-

.A 1000 A9 00   LDA £#00
.A 1002 8D 20 DO STA #D020
.A 1005 _

Continue typing from the cursor position:- RTS (return twice)
You should now have this small m/c code program on the screen:-

This is composed of four groups:-
a) the address the program is being assembled at.
     b) the hex value of the instruction (OP CODE) at that address.
          the low byte of an address, or date (OPERAND)
          and the next byte of a 16 bit address

          c) the assembly language mnemonic

          d) the date or address as entered

.A 1000 A9 00   LDA £#00
.A 1002 8D 20 DO STA #D020
.A 1005 60   RTS
.

To run this program type W (return) to go back to Basic and then type:-
SYS4096 (return) and watch what happens. If the border does not change
colour then you've gone wrong somewhere.
     So what does this program actually do? Well it is equivalent in
operation to typing POKE53280,0. In fact it simply placing a number - in
this example 00 in location D020 (53280 in decimal) which is the video chip
register which determines the border colour. 00 is black, 01 is white, etc -
find out which numbers represent which colours yourself. Remember the number.
must be in hex and should not exceed 15 (OF).
     Try altering #D020 to #D021 and then running the program. Incidentally,
to list the program, re-enter the monitor, & type:- D 1000 1010 (return)
Just overtype the number you want to change and press return.

     Now we'll look at the program line by line.

Typing A 1000 tells the monitor that you are Assembling a machine code
program commencing from location 1000 hex which is 4096 decimal.(If you
don't believe me type:- U 1000 (return) - the U command which is in the new
V2.9 operating system, converts a number from hex to decimal).
     LDA as you now know is the mnemonic or assembly language
instruction for LoaD the Accumulator and £#00 means load it with 00 (hex for
zero).
     The next instruction you typed in is STA #D020. This instruction means
Store The Acumulator' ie put the contents of the accumulator in location
#D020.
     The last instruction is RTS - Return from SubRoutine - this tells the
microprocessor that the program or subroutine, if it is part of a larger
program, has been executed and that the computer should be restored to the
.state it was in before the program was run in readiness for the next
command.
     To run the program you have to exit the monitor and use the Basic SYS
command. This, as you probably already know, is the Basic command that tells
the machine to execute a machine-code program starting at the address
specified. So the sequence of events is:-

1) W = warm start back to Basic
2) SYS4096 to execute the machine code at $1000 (4096 in decimal).
3) Return to Basic when the RTS instruction is executed.

This small assembly language program is really a subroutine. It could be incorporated into a much larger program and would be executed by a JSR instruction which is the machine code version of a SYS. In fact most programs are nothing more than a large number of subroutines, each one being called depending upon whether a certain condition is met or whether something like a sprite collision has occurred for example.

Try this larger program and see what happens. Press RESTORE to get back into the monitor and then type:- (press return at the end of each line , but otherwise just type it in as shown below)

```
A C000 LDA £#10
STA $02
LDX £#FF
LDY £#FF
DEY
BNE $C008
DEX
BNE $C006
INC $D020
DEC $02
BNE $C004
RTS now press return twice to get onto the next line.
```

Now clear the screen and type:- D C000 C016 (return)
You will now see the disassembly of the program you've just typed in and it should look like this:-

```
., C000 A9 10    LDA £#10
., C002 85 02    STA $02
., C004 A2 FF    LDX £#FF
., C006 A0 FF    LDY £#FF
., C008 88       DEY
., C009 D0 FD    BNE $C008
., C00B CA       DEX
., C00C D0 F8    BNE $C006
., C00E EE 20 D0 INC $D020
., C011 C6 02    DEC $02
., C013 D0 EF    BNE $C004
., C015 60       RTS
., C016 00       BRK
```

Now type W (return) to go back to Basic and then enter SYS49152 (return)

       What happens and why ?

       The first thing point out is that unlike the first program, this one is assembled at C000 - this is where it resides so that is why you have to type 49152 (C000 in hex) after SYS. This area is reserved for machine code programs and if you were to type in your own Basic program, you would find that you could still run your machine code program even after typing NEW to erase the Basic program.
       Now, taking the first 4 lines :-

```
., C000 A9 FF    LDA £#10
., C002 85 02    STA $02

., C004 A2 FF    LDX £#FF
., C006 A0 FF    LDY £#FF
```

Line 1 loads the accumulator with 10 because there are 10 (16 in decimal)
       border colours available.
Line 2 stores this value in memory location 2. You could use virtually any
       free memory location.
Line 3 LoaDs the X register with FF = 255 decimal.
Line 4 LoaDs the Y register with FF = 255 decimal.

The X and Y registers are temporary storage locations within the
microprocessor chip and we are putting 255 into each of them so that we can
use them as a delay loop. If we did not have any delay, the border colurs
would change so fast that you'd barely notice them flash. Looking at the
next 4 lines:

```
.,  C008 88        DEY
.,  C009 D0 FD     BNE $C008
.,  C00B CA        DEX
.,  C00C D0 F8     BNE $C006
```

DEY means decrement the Y register ie subtract one from the value stored in
it. BNE $C008 means Branch if Not Equal to zero to memory location $C008.
What happens here is that, one is subtracted from the value in the Y
register (255 initially you'll remember), and if the result is not zero,
then the program goes back to line $C008 and subtracts one again. It keeps
on looping back to line $C008 from line $C009 until the result is zero -
obviously it will loop back 255 times and on the 256th time the result will
be zero so the program will continue with line $C00B.
    DEX means decrement the X register so the same thing will happen again,
with the X register being decremented by one but this time it loops back to
line $C006 255 times and puts $FF back into the Y register each time it does
so (otherwise the Y register loop wouldn't do anything after the first
decrement).

    Things may be getting a little confusing now, but what we have is a
loop within a loop - the Y register counts down from 255 to 0 and the number
of times it does this is set by the value in the X register. In this case Y
is decremented from 255 to zero 255 times to give us a nice long delay. We
need to have a quite long delay because machine code is so fast that the
colours would stepped through in the blink of an eye. Try changing $FF in
line 3 to say, $20 - do the colours flash quicker ? They should do because
Y is decremented only 32 times ($20 in hex). Now for the last 4 lines.

```
.,  C00E EE 20 D0  INC $D020
.,  C011 C6 02     DEC $02
.,  C013 D0 EF     BNE $C004
.,  C015 60        RTS
```

INC $D020 adds one to the value in location $D020 which is the video chip
register which controls the border colour. A number fore 0 to 15 determines
the colour so this is the line that actually changes the colour.
DEC $02 means subtract one from the value in $02 ($10 or 16 decimal you'll
remember which was put there in line 2).
BNE $C004 means that unless the value in $02 is zero then the program loops
back to line $C004 - the start of the delay loop. When the value in $02
becomes zero the program continues to line $C015, executes the RTS

instruction and the Basic cursor reappears.

    So to sum up, the program consists of:-
1) setting the maximum number of colours we want to display in $02
2) programming a two loop delay so that we can see the colours change.
3) programming the main loop which increments the value in the Video chip
register and then goes to the start of the delay loop until all colours have
been shown.
4) returning control back to basic when the program has finished.

Try altering the values in lines 2, 3, 4 and running the program - don't
forget to press W first and if you accidentally press N - tough, you've just
erased your program.

    PLEASE NOTE - SINCE MY PRINTER CONVERTS HASH SIGNS TO £ SIGNS, PLEASE
            REMEBER TO USE A HASH SIGN WHWEREVER YOU SEE A POUND SIGN. ..

Thanks to all of you who sent in pokes and cheats - keep sending them in - we will publish all we can. Please don't forget to state which operating system you used if sending in a cheat.

How to enter the cheats/pokes. See the monitor instructions if you are unsure about using the various commands.

     1) Stop the game using the ESM if necessary.
     2) Type in the cheat - Use the D command to "list" a line of the program (put a full stop after the address to list only the one line) and then use the cursor keys to locate the numbers to be changed and then overtype with the values given in the cheat. When you press return, other parts of the line may change too - this is okay.
     3) Alter the restart address using the / command where necessary.
     4) Restart the game by using the R command to test out the cheat.
     5) Alter the Q value if necessary before saving the game.
==

These pokes were received from GADGET -no address given.

<u>CRYSTAL CASTLES</u> V2.7

for infinite lives type:- F A29D A29D 9F (return)

<u>WARLOCK</u> V2.7

to disable spite/background collisions :- F 1606 1606 02 (return)

Jeff Davis of Wittering has been busy this christmas....

<u>DRUID</u> V2.7

Invincible to Nasties:- change line 8514. Type:- D 8514.
                          and change it to:- ,. 8514 EA EA EA (return)

Invincible to Water:- change 8BCB. Type:- D 8BCB.
                    and change it to: ,. 8BCB E9 00   SBC #0C (return)

Remain invincible once spell is cast. D 8E5F.
                    and change it to:- ,. 8E5F EA EA EA (return)

Infinite Water, Fire & Lightning spells. D 90E9.
                    and change it to:- ,. 90E9 EA EA EA (return)

<u>ZOIDS</u>

For infinite missiles change 4C11 to 4C11 EA EA EA (return)

These next few pokes were sent in by a Belgian Expert owner - Jean Jacques Francois form Nivelles.

<u>BREAKTHRU</u>

for infinite lives change line 19CC. Type:- D 19CC EA EA EA (return)

<u>AVENGER</u>

for infinte lives type:- D 1912 EA EA EA (return)
                         D 192C EA EA EA (return)
                         D 194C EA EA EA (return)

for infinite weapons type:- D 15CB EA EA EA (return)
                            D 15D5 EA EA EA (return)

<u>XEVIOUS</u>

for infinite lives type:- D 161F EA EA EA (return)

<u>LEGEND of KAGE</u>

for infinite lives type:- D 3530 EA EA EA (return)

Thanks to David Slack of Maidstone, Kent for these:-

THE SENTINEL - makes the Sentinel and sentries inactive.

.F 1331 1333 EA (return)

AVENGER
for unlimited energy: . F 1912 1914 EA (return)
for ?????   . F 1DB4 1DB6 EA   "

1942   Terry Gowshall from Perth, Australia sent in this poke for 1942.

type: D1741. (return) and alter the line to read: ., 1741 60   RTS (return)

From Micheal Fish of Pontypridd, S. Wales is acheat for:-
COBRA - infinite bullets.

turn the EXPERT on when you are ready to stop the game and type: d ODA2
change the line to read: ., ODA2 EA EA EA (return twice).

PROGRAM NAME	Q VALUE	RESTART ADDRESS	NOTES	Q VALUES.
ROCK n WRESTLE	02			
FRANKIE GOES TO H'WOOD	02			
DOOMDARKS REVENGE	02			
EMPIRE	02			
PITSTOP 2	02			
RED HAWKE	02			
MR DO	02			
ROLAND'S RAT RACE	02			
ELECTROGLIDE	02			
DEATH WAKE	02			
VIDCOM 64	02			
BOMBO	04	970E		
TOUCH DOWN FOOTBALL	02			
KNIGHT GAMES	D4			
TAU CETI	02			
LEADER BOARD	DO	press play on tape		
GHOSTS N GOBLINS	02	0850		
PRACTICALC	DO			
BRUCE LEE	DO			
THE BOGGIT	DO			
REBEL PLANET	40	0FE9		
SPEEDKING	02			
ICUPS	DO	0810		
COLLAPSE	DO			
VELOCIPEDE 2	DO			
THE ART STUDIO	DO	62D8	LOAD GAME, SELECT SPRAY PAINT AND SPRAY ANYTHING ON SCREEN. PRESS RESTORE. ALTER RESTART ADDRESS AND Q VALUE AND THEN SAVE.	
CLEAN UP TIME	DO			
NOMAD	05	1000		
METABOLIS	E3			
BOUNDER	02	0FC0		
MIAMI VICE	08			
IRIDIS ALPHA	04	4000	JUMPS INTO MONITOR WHEN LOADED	
GALAXIBIRDS	DO	2800		
MISSION AD	DO			
ARAC	66			
VALHALLA	DO			
PARALLAX	02	013F	STOP THE GAME IMMEDIATELY	
GREEN BERET	02		USE V1.8/2.8, KEEP DRIVE SWITCHED OFF UNTIL YOU PRESS RESTORE. SWITCH DRIVE OFF JUST BEFORE THE GAME RUNS AFTER RELOADING.	

Game	Q	Addr	Notes
DAN DARE	EE		
FANTASTIC FOUR	DE		
ROOM TEN	DO		
SPIKEY HAROLD	04	7000	JUMPS INTO MONITOR WHEN LOADED
HOODOO VOODOO	DO	FCE2	
WARHAWK	02	6039	
NINJA	DO		
STRIKE FORCE HARRIER		080C	
TRIVIAL PURSUITS	59		MULTIPART. PRESS PLAY ON TAPE WHILST PLAYING
JACK THE NIPPER	DO	32B3	
THE LEGEND OF SINBAD	04		
ASTERIX	02		
TRAP	44	1D54	
HAPPIEST DAYS OF YR LIFE	07	BB60	
HARVEY HEADBANGER	DO		
W.A.R.	50	017F	ESM MODULE NEEDED.
ALLEYCAT	C1	0833	ESM NEEDED. STOP GAME ON FIRST SCREEN.
DRUID	50	1400	
DANTES INFERNO	DO	C00B	
PAPER BOY	E2		
MISSION OMEGA	C0		
BREAKTHRU	DO		
EREBUS	38		
COLOUR OF MAGIC PART 1	06		
STRIKE FORCE COBRA	02		
AMERICA CUP CHALLENGE	02		
BAZOOKA BILL	44		
SANXION	44	1F98	ESM NEEDED.
WARRIOR II			
DRAGON'S LAIR	53	15C8(DISK) 0252(TAPE) SWITCH EXPERT ON AT HI-SCORE SCREEN	
EQUINOX	DO		
HOLLYWOOD OR BUST	DA		
ARCANA	02		
KNIGHT RIDER	08	CCD5	
TRAP	44	1D54	
FIST 2	C8		
HIGHLANDER	DO	80A5	
GLIDER RIDER	DO		
VERA CRUZ PART 1 & 2	DO		
ANTIRIAD	40	8009	
LAW OF THE WEST	07		
GALVAN	04	9F65	
TRIAL BLAZER	DO		
SCOOBY DO	SEE "NEW GAMES"		
TERRA CRESTA	" " "		
YIE AR KUNG FU 2	" " "		
LEGEND OF KAGE	" " "		
SENTINEL	DO		
HYPABALL	DO	0A40	
ITS A KNOCKOUT			
HANDBALL MARADONNA	07	4000	

NOTES This is obviously not a complete list of all the available games. If you can't find your game listed then try using the default Q values which are:- V1.7/2.7 = 02; V1.7D/2.7D = DO; V1.8/2.8 = DO. DO or 02 seem to work for the majority of games, if problems still occur on reloading ,then 04 is worth a try too. The next upgrade - V1.9/2.9 which has an automatic Q value should make things a lot easier - available January 1987.

The following games need more than just a change of Q

SCOOBY DOO. Use V1.7/2.7. Keep EXPERT 'on'. When monitor prompt appears
type:- Q 44 (return) and then save with Z command. Q FF may also work.

LEGEND of KAGE. Use V1.7/2.7. Turn EXPERT 'off' and load the game. Now turn
the EXPERT 'on' and press RESTORE.
Type: X (return)
      F DC04 DC04 E8 (return)
      / 0900 (return) then save in the usual way.

YIE AR KUNG FU 2. Use V1.7D/2.7D Load the game with the EXPERT switched off.
When fully loaded, switch on the EXPERT -the monitor prompt will appear
immediately.
Type: X (return)
      F DC04 DC04 E8 (return)
      / CBE3 (return) and save in the usual way.
Remember to keep the EXPERT switched off when reloading the game.

TERRA CRESTA
Follow the steps as for YIE AR KUNG FU 2 until the monitor is entered.
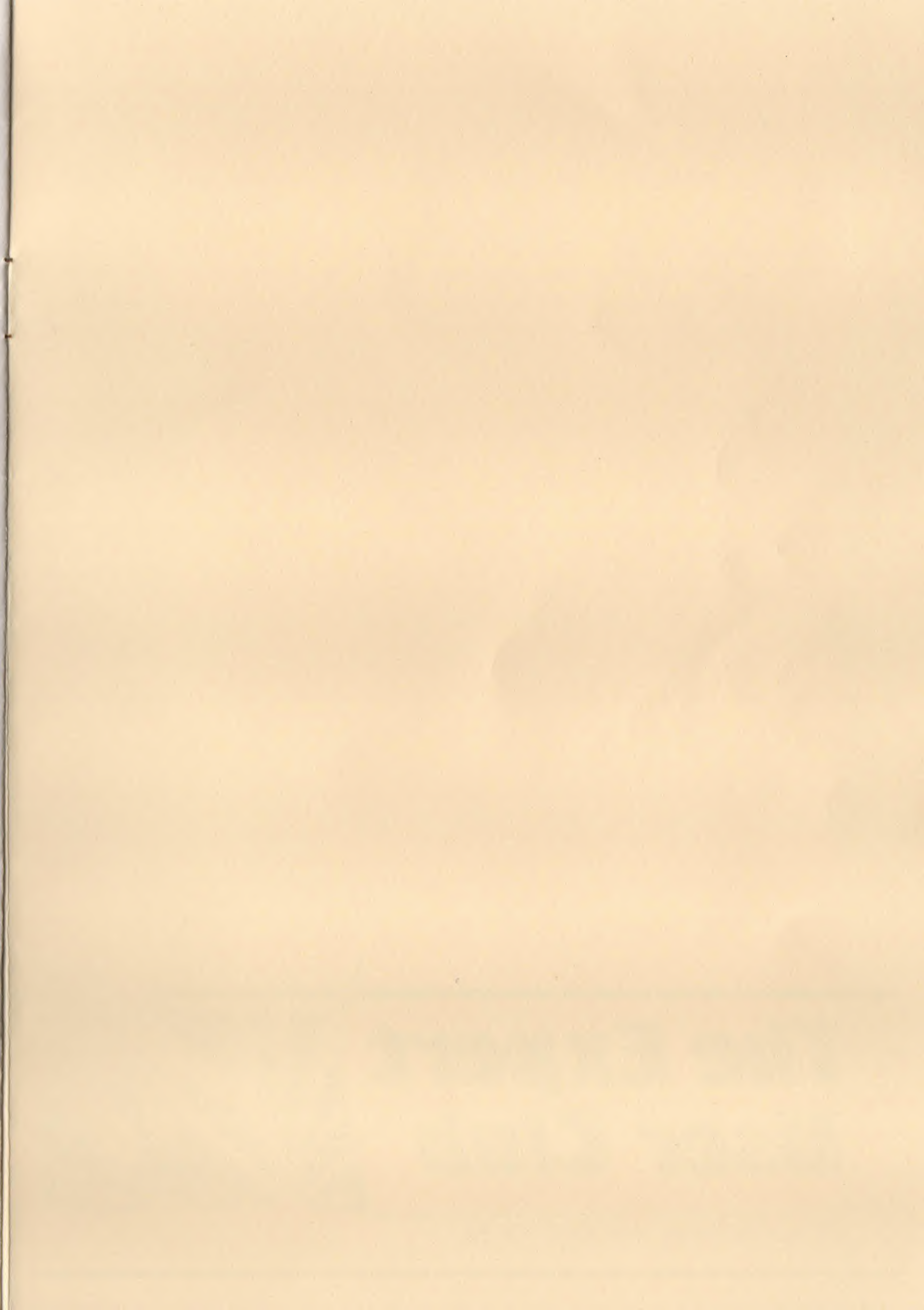now type: X (return)
          F DC60 DC60 FF (return) and then save in the usual way

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WAR
ESM + EXPERT needed. Use V1.8/2.8 (turn the computer off and then on
first). Turn the EXPERT off before loading the game.
When the led on the ESM glows turn on the EXPERT and press the ESM button to
stop the game.

The Expert
User Club

137 Stonefall Avenue, HARROGATE HG2 7NS.